Disturbances caused by computer viruses

*182. SHRI SANTOSH BAGRODIA: Will the PRIME MINISTER be pleased to state:

(a) what are the different kinds of viruses affecting the computer system in the country, especially in the Metropolitan cities;

(b) what are the sypmtoms to confirm that computers are affected by virus; and

(c) what steps Government propose to take to avoid any kind of virus disturbing the computers in the country?

THE MINISTER OF STATE IN THE MINISTRY OF SCIENCE AND TECHNOLOGY (PROF. M. G. K. MENON): (a) to (c) A Statement is laid on the Table of the House.

Statement

(a) Some computer systems in the country were reported to be infected by a computer virus, namely, "C-BRAIN";

(b) Some of the main symptoms of the computer virus are:

— slowing down of the system
— system crashing
— increase in data file size
— slowing down of the boot sequence
— problems in printing

(c) Department of Electronics had set up an Expert Committee to make a detailed study of the cases of 'Computer viruses' reported from time to time, possible reasons for spreading of such viruses and to suggest remedial meaures. The Committee has submitted its reports. The recommendations of the Committee include; creation of general awareness; security training for computer users; protection of soft ware and data by various methods and certain remedial measures such as usage of write protector 'tags' on system diskettes; strict control over transfering data and programmes between computers; frequent change of passwords; usage of audit utility programmes; proper files back up etc. Most of the recommendations of the Committee have been accepted by the Government. These will be followed up to publicize the steps to be taken and ensure precautions are taken by industry and users.

SHRI SANTOSH BAGRODIA : Sir, I would like to know from the honourable Minister, while an average programmer can write the virus code, what action does the Government intend to take against people caught writing such codes. The virus is spread through Puritas software diskettes. Does the Government plan to introduce any law against software piracy? Software piracy is also affecting international trade, and foreign companies refuse to come to India because of this. So, what steps does the Government propose to take about it?

PROF. M.G.K. MENON: Sir, with regard to the first question which the honourable Member has raised, which relates to the action to be taken againthose who introduce viruses into the systems, I would like to say that this is something to be looked into very carefully, because it is not always easy to identify how viruses are actually introduced to be able to trace them explicity to specific culprits. If culprits are identified that should be ways of dealing with them including punitive action. I would like, in this connection, to point out that as far as India is concerned, we are not yet dealing extensively with networking systems, and all the viruses which have been reported in India are essentially on, what are referred to as, IBM Personal Computer Compatible Systems. These are not really meant for a shared multi users environment. The viruses have been mostly introduced through floppy disks. On the other hand, one knows the international environment. and certainly we will get to that as we get into computer networked multi-used evironments on a large scale. One can through any input system, get

viruses into the computer system. But in all of these, ample precautions can be built into them in terms of security of computer systems to prevent such things happening. Even so, virus entries do occur. Therefore the question of trying to identify how a virus got in, who was responsible and then to take action is something which we will have to go into in detail, taking note of international experience in this regard.

The second part of the question relates to software piracy,, This is a more general question which relates not only to computer software but the whole area of books of other copyright ed material of records and tapes (in the audio and video recordings), of television programmes namely the whole area where something is produced somewhere, and you make use of it in the country, as people have done very extensively without making payments. We have to consider, very carefully however to what extent one wants to impose restriction and legislate in this regard, in a manner which does not hurt this country. These are laws that currently exist which relate to intellectual property, patents, copyright conventions and so on. This is a major issue which will have to be looked into in the interest of the country in the long term against the overall question of itellectual property rights It is not related just to the area of software.

SHRI SANTOSH BAGRODIA: Sir, the Minister has just now stated that it is not easy to detect the viruses or man who has introduced the viruses. I would like to make a small statement and put a question in relation to this. A large number of new viruses like Vienna, Jerusalem, Israeli (Prints message "Kill all Arabs"). Stone (Wipes out screen, proclaims: "Your PC is stoned. Legalise Marijuana."), Joshi, Lehigh, EB21 are discovred every day. Since an antidote for them is not immediately available, a lot of data is lost irretrievably. Is the Government aware of this? Floppy diskettes distributed by Nascon against virus prevention could have carried a fresh virus, had it not been discovered in time. This was confessed by one Mr. Vijay Mukhi at a seminar on vaccines and viruses held in November 1989 at the Taj in Delhi. What is the foolproof solution that the Government can provide for this?

PROF. M. G. K. MENON: Sir, as far as the viruses to which the honourable Member has referred, we are aware of the large number of viruses which have been identfiied in the international environment. But as far as India is concerned, a high-level committee has gone into this question, which has visited all the sites and installations here viruses have been reported. All the viruses that we have seen in India are of one category. They belong to the category called "C-Brain" including the one which was seen in the Delhi University, the Ashar virus. We have not actually seen the other viruses under operating conditions in India. The reason for that, Sir, is what I had mentioned earlier, namely, these have been introduced the very large multi-user network configurations where commuters are used currently in the United States in Europe, in Japan and a variety of other places. In India we are still not on that very large multi-user networking environment. However, when we get to that, as I have said earlier there is no question that we will encounter such situations. The Committee has gone into great detail about the manner in which one can prevent such virus attacks from taking place and from propagating them. The starting point, of course, is enquiring computer security, through a pass-word and following all the precautions that are normally taken with pass-words. This is familiar to those dealing with Defence and such security areas. You cannot enter into a defence installation area unless you have the pass-word. The pass-word is changed depending on the environment. In war time the change may take place every few hours. In peace

time the change may be after a longer period great security is exercised in respect of the pass word, Just as in the case of check-book signatures, more than one person signing can be made responsible for. Even an individual who owns a computer software very often puts a restriction on himself/herself so that all aspects of it are not controlled by him or her. These are a variety of such precautions which are taken with regard to computer security. We are familiar with these aspects. The Committee has gone into the major aspects of the areas in which research should be done, locations of depositories, standarisation of software dissemination, creation of awareness and so on through the Bureau of Indian Standards. The whole range of these questions have been gone into.

SHRI N. K. P. SALVE: May I say that the House should be very anxious to reach Question No. 185 today?

SHRI MURLIDHAR CHANDRAKANT BHANDARE: I am interested in Question No. 183.

SHRI SUBRAMANIAN SWAMY: Sir, the Minister's reply shows that the Government is very casual about this problem.

MR. CHAIRMAN: Put your supplementary.

SHRI SUBRAMANIAN SWAMY: I am, Sir. I have to warm up for it.

In his reply he has said that we do not have network, large network problem viruses. Therefore, it is only confined to the PCs of the IBM type. Now the fact is that bank operations now are going to be large networking operations. Is the Government going to wait till the viruses strike before they think of a remedy? Therefore, I would like to know, when he says that a committee went into this, what the nature of this commitee is and whether it made any suggestions on this question of precautions, security for this. It is even in small computers. Sir, I may tell you that the PC in the Prime Minister's office had been affected by a virus, and for two days the Prime Minister himself got confused by the computer. That is why he has gone there just now for consultation. Therefore, the security problem is an extremely serious problem. I would like to know from the Minister the nature of this committee and whether it examined this question at all.

PROF. M. G K. MENON: Sir, may I first of all say that the Government has not been casual in this matter whatsoever. There was a committee, a high-level committee. I can give the hon. Member the report of this Committee if he so desires or lay it on the Table of the House if the Chairman so directs. I do not want to take the time of the House in going into details.

MR. CHAIRMAN: You lay it on the Table of the House if it is very long.

PROF. M. G. K. MENON: Certainly, Sir. The Committee was headed by Prof. Mahabala of the I.I.T., Madras, and computer scientists from a variety of institutions were on it as Members. There was a seminar in Delhi, which took place on the 21st of April, concerning this topic. The entire report of the committee and the recommendations emerging from this are being widely publicised through the two major computer associations, and CSI. The report is also going to appear in the Electronics Planning and Information Aalysis journal published by the Department of Electronics. Thus widespread dissemination has been planned.. We are also aware of the international situation, and the kinds of viruses which are known to affect network systems. I would also like to state that it is not that computer-networking is not on in India. Networks which already exist, such as Nicnet, Vikram net Indonet Ernet and so on. But these are still at a stage which is quite different from the sort of intense com-

petitive networking which, exists in USA and other developed countries. The Committee has gone into all of this. With the papers to be laid on the Table of the House the Members will become aware of what has already been gone into and recommended.

SHRI SUBRAMANIAN SWAMY: What about the Prime Minister's personal computer? That also has got a virus. Does he know about the security angle?

PROF. M. G. K. MENON: Sir, as you are aware...

SHRI YASHWANT SINHA: How can he answer a personal question?

SHRI SUBRAMANIAN SWAMY: Why not? Who are you to answer on his behalf?

SHRI YASHWANT SINHA: It is a personal computer.

SHRI SUBRAMANIAN SWAMY: Sir, this is the extent of their ignorance. The personal computer does not mean that you put it in your pocket. It is a word ...(*Interruptions*)

SHRI SATYA PRAKASH MALAVIYA: You are also putting one in your pocket.

SHRI SUBRAMANIAN SWAMY: That is a different personal computer.

SHRI KAMAL MORARKA: Dr. Swamy does not know the latest technology, I can deprogramme his computer which is in his pocket.

MR. CHAIRMAN: Have you any knowledge about the private computer?

SHRI SUBRAMANIAN SWAMY: Sir, personal computer is a technical word. The Prime Minister was confused for two days because his personal computer had virus in it.

PROF. M. G. K. MENON: I am not personally aware of this particular event.

SHRI JAGDISH PRASAD MATHUR: Probably Subramanian Swamy put a virus into it.

MR. CHAIRMAN: Mr. Mathur wants to know whether you put virus...

SHRI SUBRAMANIAN SWAMY: Can you trust anything which the BJP says? (*Interruptions*)

DR. G. VIJAYA MOHAN REDDY: We are importing super computers and computers. Is there a possibility of infection of such imported computers? If there is such a possibility, how can the same be eliminated?

PROF. M. G. K. MENON: As far as a computer itself it concerned, hardware can not be infected by a virus. It is the operating system, which is the software, into which one can introduce a virus so that the programme, when it actually runs, does not operate in the way you had programmed it but has an additional element which is the virus, which does other things. This essentially comes in through the software.

The second point is that this virus has to be introduced. It is normally introduced through an input system. So, if you have a computer, whether it is an imported computer or a local one, it is a question of what goes in as inputs. Therefore if you control the input system, the virus cannot be introduced. That is why I said that the whole question relates to security of software passwords and a variety these precautions which are well known. There are also a variety of virus antidotes for the purpose.

*183. [*The questions (Shri Syed Sibtey Razi) was absent. For answer* vide col. 35-36 infra]

Withdrawal and creation of Posts in the KVS

*184. SHRI MOHD. KHALEELUR RAHMAN: Will the PRIME MINISTER be pleased to state:

(a) whether it is a fact that a study has been conducted recently in the KVS to assess the staff strength;